REMARKS

Claim 1 is pending after entry of the amendments set forth herein. Claims 2-57 are canceled without prejudice. Claim 1 is amended. Support for the amending language may be found in the specification at page 12, lines 7-9, and at page 30, line 12. No new matter is added. Reconsideration is requested.

Claim 1 has been rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Meyerson et al. (The EMBO Journal 1992; 11: 2909-2917) in view of Yamamoto et al. (International Journal of Oncology 1998; 13: 233-239).

The Office Action asserts that Myerson *et al.* teach a polypeptide referred to as PCTAIRE-3, and that the nucleic acid encoding the polypeptide is present in MCF-7 human breast adenocarcinoma cell lines.

The Office Action further notes that Myerson does not teach a method of screening for biologically active agents that modulate PCTAIRE-3 comprising combining a candidate biologically active agent with PCTAIRE-3.

Yamamoto *et al.* is cited as teaching a method of determining the role of cdk2/cdc2 in colon cancer cells comprising contacting said cancer cells with a specific inhibitor of cdk2 and cdc2 and determining the effects on the cells.

It is asserted that it would be obvious to combine the teachings of the references as to the peptide of Meyerson *et al.*, using a suspected inhibitor of cdc2 in view of the teachings of Yamamoto *et al.*

Applicants respectfully submit that the presently claimed invention is not made obvious by the cited combination of art.

The primary reference, Meyerson *et al.*, teaches the genetic sequence of a number of protein kinases based on their structural relation to $p34^{CDC2}$. While the reference notes expression of PCTAIRE-3 in MCF-7 cell line, there is no indication in the reference that the polypeptide is useful in screening methods involving combining a candidate biologically active agent with the peptide. While the reference indicates some of the polypeptides, (i.e. cdk2, cdk3, PSSALRE and PLSTIRE but not PCTAIRE-3) were used in complementation assays by transformation into yeast cells, there is no teaching of screening assays aimed at determining the activity of a candidate agent that modulates the activity of the polypeptide encoded by SEQ ID NO:4.

The secondary reference, Yamamoto *et al.*, fails to remedy the deficiencies of the primary reference. Yamamoto *et al.* teaches the use of a known inhibitor of cdk2/cdc2, and the use of such a known inhibitor to determine the effective of the specific inhibition on growth and apoptosis of colon cancer cell lines.

In contrast, presently amended Claim 1 is directed at a method of identifying an agent that modulates function of PCTK3, and thus is distinct from assays performed with agents having known specific inhibitory activity.

Applicants further note that PCTK3 is biologically distinct from the interacting kinase molecules cdk2/cdc2. While there is some structural similarity, the sequence differences are significant, for example as shown in Figure 1 of Meyerson *et al.*, PCTAIRE3 differs from cdc2/cdk2 in all of the boxed, conserved motifs. Thus, one of skill in the art would not utilize a specific inhibitor of cdk2/cdc2 in a screening assay developed for PCTK3.

Applicants respectfully submit that the combined teachings of Meyerson *et al.* and Yamamoto *et al.* do not teach one of skill in the art a method of identifying agents that inhibit PCTK3 by contacting the polypeptide with a candidate inhibitor and determining the effectiveness.

In view of the above amendments and remarks, withdrawal of the rejection is requested.

Applicant submits that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815, order number KINE-038.

Respectfully submitted,
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Date: July 25, 2008

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